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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,286	10/25/2005	Friedrich Linhart	278601US0PCT	3259
22850	7590	10/16/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
WALTERS JR, ROBERT S				
ART UNIT		PAPER NUMBER		
1792				
NOTIFICATION DATE		DELIVERY MODE		
10/16/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/554,286

**Applicant(s)**

LINHART ET AL.

**Examiner**

ROBERT S. WALTERS JR

**Art Unit**

1792

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Application***

Claims 1-7 and 9-10 are pending. Claim 8 is cancelled, claims 1-5 are amended, and claims 9-10 are added.

### ***Response to Arguments***

Applicant's arguments filed 6/30/2008 have been fully considered but they are not persuasive. Applicant's amended claim describes a method of enhancing the water resistance of ink jet printed images. Applicant claims that Yutaka alone or in combination with Dyllick-Brenzinger fails to teach all the elements as neither appears to teach enhancing the water resistance of ink jet printed images, however Yutaka does teach that their invention provides a recording image having complete water resistance (see pg 2, 1<sup>st</sup> sentence under Detailed Explanation of the Invention of the enclosed translation, also see pg 3 2<sup>nd</sup> full paragraph). Therefore the references in combination do disclose all the elements of the claimed invention.

Furthermore, a showing of superior results is rebutted as Dyllick-Brenzinger teach that the polymers having vinylamine units and a charge density of greater than 3 meq/g show superior results in the drainage time of pulp during the papermaking process (see Table 2, comparative example 1.2 with a charge density of 1.7 and a drainage time of 47 seconds as compared to Example 1c having an additional polymer comprising vinylamine units with a charge density of 16.5 meq/g and a drainage time of 26 seconds), which would imply that these polymers have an enhanced ability to impart water resistance to articles to which they are

applied. Therefore, one of ordinary skill in the art at the time of the invention would have predicted that they would impart an enhanced water resistance to ink jet printed images if applied to a final paper product according to Yutaka's method.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(e) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yutaka et al. (Japanese Patent Pub. No. 60109894, a translation of which has been provided) in view of Dyllick-Brenzinger et al. (U.S. Pat. No. 6132558).

Regarding claims 1-7 and 9-10, Yutaka teaches a process for improving the printability of paper (as well as an ink-jet printing paper, which is a paper product, obtained by the process, see pg 2, 1<sup>st</sup> sentence under Detailed Explanation of the Invention) by enhancing the water resistance of the ink-jet printed image (pg 2, 1<sup>st</sup> sentence under Detailed Explanation of the Invention) wherein the process comprises treating the paper with an aqueous solution of cationic polymers by spraying the aqueous composition onto the paper or by using a size press (pg 4, last paragraph) in an amount of 0.1-2.5 g/m<sup>2</sup> (pg 5, 2<sup>nd</sup> paragraph) which is applied to the surface of the paper (pg 4, last paragraph). The cationic polymers used by Yutaka are further known to be useful in other stages of the initial papermaking process. Yutaka however fails to explicitly teach the use of cationic polymers comprising vinyl amine units having a charge density of at least 3 meq/g as the sole treatment as well as the specific limitations outlined in claims 2-5.

Dyllick-Brenzinger teaches the use of cationic polymers comprising vinyl amine units with a molar mass of 5000 to 3 million (see claim 1) where the cationic polymers are hydrolyzed homopolymers of N-vinylformamide having a charge density of 8-18 meq/g (see claims 8 and 9) as additives that increase the drainage rate of pulp in the papermaking process (see Tables 1-3). It should be noted that the cationic polymers utilized by Yutaka are also polymers that are commonly used in other steps of the papermaking process such as drainage agents, and therefore one of ordinary skill in the art at the time of the invention could also expect that the polymers

taught by Dyllick-Brenzinger as enhancing the drainage rate of paper would also be applicable in Yutaka's method. Furthermore, as the polymers having a charge density of greater than 3 mcq/g dramatically decrease the drainage time of the pulp (see Table 2, Comp Ex 1.1 with a charge density of only 1.7 as compared to Ex 1c with the addition of a polyvinylamine containing polymer having a charge density of 16.5 mcq/g) one of ordinary skill in the art at the time of the invention would expect that they are imparting an enhanced water resistance to the pulp fibers thereby pushing water away from the pulp. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to modify Yutaka's method of enhancing the water resistance of ink-jet printed images by utilizing the cationic polymers disclosed by Dyllick-Brenzinger as the sole treatment composition. One would have been motivated to make this modification as one of ordinary skill in the art at the time of the invention could have made the modification with a reasonable expectation of success and with the expected result of enhancing the water resistance of ink-jet printed images with the addition of Dyllick-Brenzinger's cationic polymers.

***Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Momma et al. (U.S. Pat. No. 5798173)

***Conclusion***

Claims 1-7 and 9-10 are rejected.

No claim is allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is (571)270-5351. The examiner can normally be reached on Monday-Thursday, 6:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT S. WALTERS JR/  
September 5, 2008  
Examiner, Art Unit 1792

/Michael Barr/  
Supervisory Patent Examiner, Art Unit  
1792

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